

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

ThinkOptics, Inc.,

Plaintiff,

vs.

Nintendo of America Inc., *et al.*,

Defendants.

No. 6:11-cv-00455-LED

[Jury trial demanded]

**Nintendo's Motion for Summary
Judgment of Invalidity**

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1. SUMMARY OF THE ARGUMENT.

Nintendo requests that the Court enter summary judgment that claims 1 and 23 of the '317 patent and claims 1, 17, and 23 of the '159 patent are invalid as obvious under 35 U.S.C. § 103 in view of Yamamoto¹ and Trinder².

ThinkOptics does not dispute the facts necessary to enter summary judgment. ThinkOptics does not dispute that Yamamoto and Trinder are prior art. ThinkOptics does not dispute that Yamamoto — which describes a handheld pointing device virtually identical to that claimed in the patents in this case — discloses most of the limitations of the claims subject to this motion. In fact, ThinkOptics does not dispute that Yamamoto discloses all of the limitations of the claims at issue in this motion, except for the requirement of a processor to perform three specific image-processing steps to determine the location of a marker on a sensor. But, ThinkOptics's expert conceded that Trinder discloses the processor and three processing steps supposedly missing from Yamamoto. Thus, there is no genuine dispute of material fact that Yamamoto and Trinder disclose all of the claims' limitations.

ThinkOptics also concedes the facts necessary to find that a person of ordinary skill in the art would combine Yamamoto with Trinder to arrive at the claimed invention. ThinkOptics's expert concedes that Yamamoto and Trinder

¹ Japanese Patent Application Publication No. H10-228349, published August 25, 1998 ("Yamamoto") (Ex. 9). Note that all exhibits referred to herein are attached the Hamilton Decl. in support of this motion filed herewith.

² J.C. Trinder, *Precision of Digital Target Location*, Photogrammetric Engineering and Remote Sensing, Vol. 55, No. 6, June 1989, pp. 883-86 (Ex. 11).

are in the same field, and that a skilled artisan would use this prior art to find techniques to determine marker locations. So, it is undisputed that a person of ordinary skill in the art would look to Trinder's improved methods of calculating precise coordinates for use in pointing systems like Yamamoto. As such, ThinkOptics's patents are nothing more than the combination of prior-art solutions used in their ordinary way to achieve their expected results. Thus, the claims are obvious and summary judgment is appropriate.

2. STATEMENT OF UNDISPUTED MATERIAL FACTS.

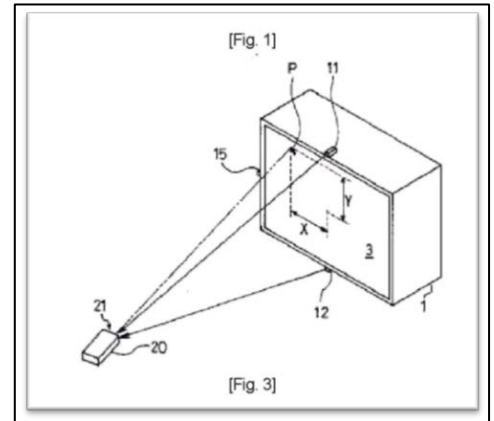
2.1. The claim limitations were all in the prior art.

The asserted patents are generally directed to “a handheld vision based absolute pointing system” for controlling or interacting with electronic equipment like a computer. The patents' systems and methods describe a handheld device with a camera in it. The camera takes a picture of infrared-light markers placed on or near a display. Images from the infrared-light markers appear on a pixelated sensor inside the camera in the handheld pointing device. The handheld device uses the images' locations in the picture to determine where the device is pointing.³

This portion of the systems and methods — that is, a handheld device that takes pictures of infrared-light markers and uses the image to determine where the device is pointing — is indisputably in the prior art. ThinkOptics does not

³ MF 2 ['317 patent at 1:15–16 (Ex. 1); '159 patent at 1:14–15 (Ex. 2)]; 3 ['317 patent at 4:36–5:26; Figure 5 (Ex. 1); '159 patent at 4:38–5:28; Figure 5 (Ex. 2)]; 4 ['317 patent at 5:13–26 (Ex. 1); '159 patent at 5:15–28 (Ex. 2)]; 7 ['317 patent at 4:36–5:12; Figure 5 (Ex. 1); '159 patent at 2:11–22; 4:38–5:14; Figure 5 (Ex. 2)].

dispute that Yamamoto (Fig. 1, right) teaches precisely this system.⁴ In fact, during the patents' prosecution, the examiner found that the basic concept described in the patents was replete in the prior art. What supposedly separated the patents from the prior art was *how* the handheld device determined the markers' location in the image.⁵



The patents claim systems and methods in which the handheld device includes a processor that performs three specific image-processing steps to determine the markers' locations in the image. So, the claims at issue in this motion — in fact, all of the claims in all asserted patents — require the handheld device to have a processor that processes the image data using the following three specific processing steps:

- [1] determining an intensity value for each [pixel] of the pixelated sensor, the intensity value attaining one of three or more quantized intensity values;
- [2] identifying pixels which have an intensity value above a specified threshold;
- [3] using only those pixels which have an intensity value above the specified threshold, generating the coordinate data based on both the intensity value for each of the pixels and the location of each of the pixels on the pixelated sensor. . . .⁶

⁴ MF 6 [Yamamoto at Fig. 5 and accompanying text (Ex. 9); claim charts, (Exs. 4, 5)]; 12 [2013-12-13 ThinkOptics, Inc.'s Responses to First Set of Interrogatories, Interrogatory No. 1 and accompanying claim charts Appendices S-U (Ex. 10); Zeidman Tr., Ex. 204 (Ex. 6)]

⁵ MF 10 ['317 patent file history, 2010-08-12 Notice of Allowability at 3 (Ex. 7); '159 patent file history, 2010-08-24 Notice of Allowability at 3 (Ex. 8)].

⁶ MF 8 ['317 patent, claims 1 and 23 (Ex. 1); '159 patent, claims 1, 17, and 23 (Ex. 2)]; 9 [Zeidman Tr. at 38:1-8; 355:5-18 (Ex. 6)].

The handheld's processor and image-processing steps supposedly distinguished the invention over the prior art. So, after almost six years of prosecution, the patent examiner allowed the then-pending claims because they included the three image-processing steps, added by amendment.⁷ In fact, all of the claims' limitations are in the prior art, as the PTO has repeatedly found in the on-going reexaminations. In the reexaminations, after hearing ThinkOptics's best arguments and evidence to the contrary, the PTO determined that the claims are not patentable because they are anticipated or obvious in light of the prior art, including Yamamoto.⁸

2.2. ThinkOptics concedes that Yamamoto discloses all claim limitations relating to the handheld device and Trinder discloses the processor and processing steps.

As described above, there is no genuine dispute that the patents' basic system is in the prior art, including in Yamamoto. Like numerous other references, Yamamoto discloses a handheld device with a camera in it. The camera takes pictures of infrared-light markers placed on or near the display. The handheld device calculates the position of the light markers on the handheld's camera, and transmits those coordinates to a device that calculates

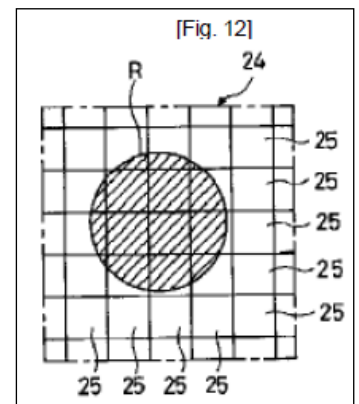
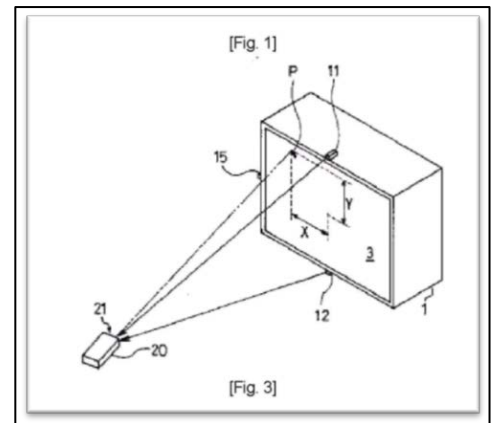
⁷ MF 10 ['317 patent file history, 2010-08-12 Notice of Allowability at 3 (Ex. 7); '159 patent file history, 2010-08-24 Notice of Allowability at 3 (Ex. 8)].

⁸ MF 27 [*Inter Partes* Reexamination No. 95/002,114, 2013-08-16 Action Closing Prosecution (Ex. 13); *Inter Partes* Reexamination No. 95/002,118, 2013-10-04 Non-Final Rejection (Ex. 14)].

the handheld's pointing position. The Yamamoto system is shown in Fig. 1 (right), and Yamamoto's calculation of the light marker's location on the image sensor is shown in Fig. 12 (right).⁹

ThinkOptics's concedes this much in its claim charts identifying the limitations it contends Yamamoto does not disclose.¹⁰ The claim charts confirm that ThinkOptics does not dispute that Yamamoto discloses all of the claim limitations, except for the processor and image-processing-related steps.¹¹

The processor and image-processing steps that are supposedly missing from Yamamoto are found in Trinder, as ThinkOptics's expert, Robert Zeidman, concedes. Trinder appeared in a 1989 edition of the journal *Photogrammetric Engineering and Remote Sensing*.¹² Trinder discloses a series of experiments to determine how to make pointing based on photographic targets more precise. In Trinder's words: "Extensive investigations have been carried out on digital pointing to circular targets to determine the influence of image quality, pixel size in the image,



⁹ MF 11 [Yamamoto, Figures 3 and 12 in accompanying text (Ex. 9)].

¹⁰ MF 12 [Plaintiff ThinkOptics, Inc.'s Supplemental Objections and Responses to Defendant Nintendo Co., Ltd.'s First Set of Interrogatories, served Dec. 13, 2013, Interrogatory No. 1 and accompanying claim charts Appendices T-U (Ex. 10); Zeidman Tr., Ex. 204 (Ex. 6)].

¹¹ *Id.* Note that ThinkOptics also disputes the portions of the claims for which the processor and processing steps provide antecedent basis, but does not dispute that Yamamoto discloses those limitations independent of the disputes regarding the processor and processing step limitations.

¹² MF 13 [Trinder at 883 (Ex. 11)].

quantization level, and noise on the precision of pointing.”¹³ Thus, Trinder teaches how to improve digital pointing by making it more precise.

Zeidman confirmed that the method Trinder disclosed to improve digital pointing is used to calculate the location of an image on a pixelated sensor. Zeidman testified that Trinder is used to “determin[e] the location . . . of an image. I guess, more precisely, of a circular target location on a digital image. . . .”¹⁴

Zeidman testified that Trinder uses a processor to determine the location of a marker on a pixelated sensor, just as claimed in the patents:

Q. And just to clarify, [Trinder] discloses the use of a processor, as the term is used in the patents-in-suit, and that is logic circuitry that executes program code instructions; is that correct?

* * *

A. I believe so, yes.¹⁵

Zeidman also confirmed that Trinder discloses each of the three image-processing steps. With respect to the first image-processing step, Zeidman, testified:

Q. So let’s talk about the first one. . . . I’m going to read it in total. . . . Determining an intensity value for each of the pixel -- each of the pixelated sensor, the intensity value attaining one of three or more quantized intensity values. You see that?

A. Yes.

* * *

¹³ MF 14 [Trinder at Abstract (Ex. 11)].

¹⁴ MF 15 [Zeidman Tr. at 185:10–13 (Ex. 6)].

¹⁵ MF 16 [Zeidman Tr. at 193:20–25 (Ex. 6)].

Q. And then, going back to that first step that we talked about . . . Let's call that "the quantizing step," and that encompasses that entire paragraph. Is that all right with you?

A. Okay.

* * *

Q. So Trinder teaches . . . the quantizing processing step that we discussed earlier today. Is that correct?

* * *

A. I believe so.¹⁶

Zeidman confirmed that Trinder discloses the second processing step:

Q. And then if you look at the next step, the paragraph reads: Identifying pixels which have an intensity value above a specified threshold. Do you see that?

A. Yes.

Q. I'm going to refer to that as "the thresholding step."

A. Okay.

* * *

Q. So Trinder discloses the thresholding step — step, as claimed in the patents-in-suit; is that correct?

* * *

A. . . . [I]t does independently describe thresholding.¹⁷

Finally, Zeidman confirmed that Trinder discloses the third image-processing step:

Q. And then, finally, the last paragraph . . . starts with "using only those pixels which have an intensity value above a specified threshold generating the coordinate data." And then it goes on. I'm going to refer to that as . . . "the generating coordinate data step."

A. Okay.

¹⁶ MF 17 [Zeidman Tr. at 35:7–14; 36:14–19; 185:10–13 (Ex. 6)].

¹⁷ MF 18 [Zeidman Tr. at 35:19–36:1; 190:3–12 (Ex. 6)].

* * *

Q. Does Trinder disclose the generating coordinate . . . data step, as claimed in the patents-in-suit?

* * *

A. I believe it does.¹⁸

Between Yamamoto's optical pointing system and Trinder's processor and image-processing steps, all of the limitations for each of the claims at issue in this motion are disclosed in the prior art. Specific citation to where Yamamoto and Trinder disclose the claim limitations of claims 1 and 23 of the '317 patent and claims 1, 17, and 23 of the '159 patent is set forth in the claim charts attached as Exhibits 4 and 5 to the Hamilton Decl.¹⁹

3. STATEMENT OF ISSUES TO BE DECIDED BY THE COURT.

ThinkOptics cannot dispute that the combination of Yamamoto and Trinder disclose all of the limitations of the claims at issue in this motion. ThinkOptics's expert does not dispute that Yamamoto and Trinder are in the same field, and that a person of ordinary skill in the art would look to materials in the same field to improve pointing accuracy. Are the asserted claims obvious over Yamamoto in view of Trinder?

4. LEGAL STANDARDS FOR SUMMARY JUDGMENT OF INVALIDITY.

In *KSR Int'l v. Teleflex, Inc.*, the Supreme Court confirmed that obviousness is a question of law based on the underlying factual inquiries articulated in

¹⁸ MF 19 [Zeidman Tr. at 36:2-13; 190:13-17 (Ex. 6)].

¹⁹ MF 28 [(Ex. 4, 5)]. Note that while Nintendo contends that the references disclose additional limitations, the claim charts are limited to the claim limitations not in dispute.

*Graham v. John Deere Co.*²⁰ The underlying factual inquiries are: determining the scope and content of the prior art; ascertaining the differences between the claimed invention and the prior art; and resolving the level of ordinary skill in the art.²¹ A patentee may also present evidence of secondary considerations to rebut a *prima facie* finding of obviousness.²² Because obviousness is a legal issue, the Supreme Court held that where “the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in material dispute, and the obviousness of the claim is apparent in light of these factors, summary judgment is appropriate.”²³

In *KSR*, the Supreme Court provided guidance on how to resolve the legal issue of obviousness, stating that “when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.”²⁴ So, the Supreme Court summarized, “when ‘a patent simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.”²⁵ Further, the Court held that an express teaching, suggestion, or motivation to combine prior art references is not necessary to find obviousness, so long as the combination of those references

²⁰ 550 U.S. 398, 427, 127 S.Ct. 1727 (2007) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 86 S.Ct. 684 (1966)).

²¹ *Id.* at 406.

²² *Id.*

²³ *Id.* at 427.

²⁴ *Id.* at 416.

²⁵ *Id.* at 417 (citations omitted).

includes the combination of known functions for their expected result.²⁶ While not required, the Supreme Court found that the teaching, suggestion, or motivation test can support an obviousness determination.²⁷

5. SUMMARY JUDGMENT IS APPROPRIATE ON THE LEGAL QUESTION OF WHETHER THE COMBINATION OF YAMAMOTO AND TRINDER RENDERS THE ASSERTED CLAIMS OBVIOUS.

No disputed issues of material fact preclude the Court from entering summary judgment on the legal issue of whether the asserted claims are obvious over Yamamoto's optical pointing system in view of Trinder's processor and processing steps. This is so because ThinkOptics does not dispute that the two prior art references disclose *every claim limitation* and that the claims simply recite the combination of the optical pointing system of Yamamoto with the known processing of Trinder to achieve their expected result. Thus, Nintendo is entitled to judgment of obviousness as a matter of law.

5.1. The scope and content of the prior art is not in material dispute.

ThinkOptics does not materially dispute the scope and content of the prior art. ThinkOptics cannot dispute that the asserted patents claim the combination of Yamamoto's optical pointing system with Trinder's processor and three claimed processing steps to determine the location of a marker on a pixelated sensor.

²⁶ *KSR*, 550 at 418–420.

²⁷ *Id.* at 421–422.

ThinkOptics's only quibble with the Yamamoto and Trinder combination is that Trinder supposedly discloses the three processing steps out of order. That is, ThinkOptics contends that Trinder discloses the second processing step — thresholding — and the third processing step — determining coordinate data — before disclosing the first processing step — quantizing. So, ThinkOptics claims that Yamamoto and Trinder do not yield the claimed invention.²⁸ But this supposed dispute concerning Trinder's order of disclosure does not save ThinkOptics from summary judgment.

ThinkOptics's contention that Trinder discloses the three processing steps out of order is not mentioned *anywhere* in Zeidman's expert-witness report. Instead, this contention arose, for the first time, when Zeidman articulated the theory on the fly during his deposition. This is what he testified:

Q. So it's your understanding that Trinder discloses in this order . . . : The thresholding step of the patents-in-suit, the generating coordinate data step of the patents-in-suit. And then following its disclosure of the generating coordinate data step of the patents-in-suit, it discloses the quantization step of the patents-in-suit. Is that correct?

* * *

A. That appears to be the case.

Q. And . . . is it your testimony that because the discussion in Trinder of the quantization step comes after the disclosure of the thresholding step and the generating coordinate data step that that implies that the . . . quantization step occurs after the thresholding step and the generating coordinate data step. Is that correct?

* * *

A. I believe so.

²⁸ MF 20 [Zeidman Tr. at 197:12-198:11 (Ex. 6)].

Q. Do you have any other basis for believing that that quantization step occurs after the thresholding step and the generation of coordinate data step?

A. That's my understanding.²⁹

ThinkOptics cannot rely on Zeidman's order-of-disclosure argument to resist summary judgment for two reasons. First, Zeidman's on-the-fly explanation is contradicted by the Trinder paper itself. Trinder explicitly discloses that the quantization step comes before the other two steps. In Trinder's words, "[f]ollowing quantization, the precision of target location was determined. . . ." ³⁰ "Target location" is the calculation of coordinate data, which "follow[s]" quantization. Trinder also discloses that the precision with which the system can calculate coordinates was impacted by the level of quantization. Trinder states, "[t]here is a general deterioration in precision [of target location] as quantization levels decrease. . . ." ³¹ If quantization affects the precision of coordinate calculation, then quantization must come *before* coordinate calculation. Otherwise, the quantization level could not affect the precision with which coordinates are calculated. Simply put, the cause must come before the effect.

Courts do not permit an expert to manufacture disputed facts by contradicting an unambiguous prior-art disclosure. For instance, in *Kimberly-Clark Worldwide, Inc. v. First Quality Baby Products*, the Eastern District of Wisconsin stated that "[a]n expert cannot be used to manufacture an issue of fact

²⁹ MF 20 [Zeidman Tr. at 197:12-198:11 (Ex. 6)].

³⁰ MF 21 [Trinder at 883 (Ex. 11, NIN_TO_0070517)].

³¹ MF 22 [Trinder at 884 (Ex. 11, NIN_TO_0070518)].

as to what the prior art teaches when that prior art is clear on its face.”³² Such is the case here.

The second reason ThinkOptics cannot rely on Zeidman’s argument to resist summary judgment is because ThinkOptics has no *admissible* evidence to support it. Zeidman’s expert report is silent on Trinder’s supposed order-of-disclosure issue. So, Zeidman cannot testify to it at trial.³³ ThinkOptics has no other expert witness who can testify to this issue, and as a result, ThinkOptics has no admissible evidence on which it can rely to support the argument.

5.2. The level of ordinary skill in the art is not in material dispute.

ThinkOptics does not materially dispute the level of ordinary skill in the art. ThinkOptics asserts that one of ordinary skill in the art at the time of the filing date of the asserted patents would have “a Bachelor’s degree in electrical engineering with at least two years of experience designing controllers or a Master’s degree in electrical engineering.”³⁴ Nintendo’s proposed definition of one of ordinary skill in the art is similar, except that it includes a description of the specific skills someone with the education or experience proposed by ThinkOptics would have. Under either definition, the claims are obvious. So for the purposes of this motion, the Court can accept ThinkOptics’s less specific proposed definition of one of ordinary skill in the art.

³² 900 F.Supp.2d 903 (E.D. Wis. 2012) (finding patent invalid as obvious).

³³ See *Witt v. Chesapeake Exploration, LLC*, Case No. 10-cv-22-TJW, 2011 WL 2790174 at *2 (E.D. Tex. July 14, 2011).

³⁴ MF 23 [Zeidman Rebuttal Invalidity Report at ¶ 80 (Ex. 12)].

5.3. A skilled artisan would combine Yamamoto and Trinder.

ThinkOptics cannot dispute that one skilled in the art would have looked to references, such as Trinder, to improve the pointing system of Yamamoto.

ThinkOptics's expert admits that one skilled in the art would have looked to known methods in the art for methods of determining an image's location on a sensor. Zeidman testified "one of ordinary skill in the art would have used other references to find various techniques to determine the location of a marker on a sensor."³⁵ Zeidman confirmed that Trinder was one of those techniques to "determine the location of a marker on a sensor,"³⁶ and that Trinder, like Yamamoto, was in the same field of art as the asserted patents.³⁷

In fact, Trinder expressly discloses how using the three claimed processing steps to identify the location of a circular target improves the precision and accuracy of the determined location in digital pointing applications. Trinder states, "[e]xtensive investigations have been carried out on the digital pointing to circular targets to determine the influence of image quality, pixel size in the image, quantization level, and noise on the precision of pointing."³⁸ In other words, Trinder discloses that the known function of using the claimed processor to perform the three processing steps is to more precisely identify a target location in a pixelated image for digital pointing, and the known result of using that method is a more precise and accurate location of the target on the sensor.

³⁵ MF 24 [Zeidman Tr. at 108:9-18 (Ex. 6)].

³⁶ MF 15 [Zeidman Tr. at 185:10-13 (Ex. 6)].

³⁷ MF 25 [Zeidman Tr. at 104:3-6 (Ex. 6)].

³⁸ MF 26 [Trinder at Abstract (Ex. 11, NIN_TO_0070517)].

Thus, combining Trinder with Yamamoto results in a more precise handheld pointing system — exactly the purported invention here.

6. CONCLUSION

No disputed issues of material fact preclude summary judgment, and, therefore, the Court should enter judgment as a matter of law that claims 1 and 23 of the '317 patent and claims 1, 17, and 23 of the '159 patent are invalid.

February 24, 2014

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CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing document on
counsel who have appeared in this case by ECF on the February 24, 2014.

/s/ Grant Kinsel